

(PCT Article 36 and Rule 70)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/003689

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-17 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1, 2, 5, 7 _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 3, 4, 6, 8-13 _____ received by this Authority on 21.02.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/12-12/12 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-13	YES
	Claims		NO
Inventive step (IS)	Claims	1-13	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP 9-181355 A (Matsushita Electric Industrial Co., Ltd.), 11 July 1997

Document 2: Onojima et al., 'Molecular-beam epitaxial growth of insulating AlN on surface-controlled 6H-SiC substrate by HCl gas etching', Applied Physics Letters, 7 January 2002, Vol. 80, No. 1, pages 76 to 78

Document 3: JP 11-145514 A (Toshiba Corporation), 28 May 1999

The invention set forth in claims 1, 2 and 7 to 13 is novel and involves an inventive step in relation to documents 1 to 3 cited in the international search report.

None of the documents indicates that after irradiating with Si or Ga a SiC surface having had the oxide film removed, high-temperature heat treatment is carried out, after which a Group III nitride is grown.

The invention set forth in claims 3 to 5 is novel and involves an inventive step in relation to documents 1 to 3 cited in the international search report.

None of the documents indicates that nitrogen is fed

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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to a SiC surface after feeding a monolayer or inferior quantity of a Group III element.

The invention set forth in claim 6 is novel and involves an inventive step in relation to documents 1 to 3.

None of the documents indicates that a surface oxide film is removed using a solution containing hydrofluoric acid in an atmosphere with a diminished oxygen partial pressure.